

INFORMATION SHEET

ORDER NO. R5-2009-_____
SULARA ENTERPRISES, INC.
POST-CLOSURE MAINTENANCE OF
DRILLING MUD DISPOSAL FACILITY
GLENN COUNTY

Sulara Enterprises, Inc. (Discharger) owns and operates a closed drilling mud disposal facility (Facility) located approximately one mile south of Orland, Glenn County, on Assessor Parcel No. 024-33-0-011, in Section 4, T21N, R3W, MDB&M. Waste disposal activities have occurred on approximately 8.4 acres of the 33.59-acre Facility.

Two significant geologic units underlie the Facility. Pleistocene to recent age alluvium of the Stony Creek fan occurs from the surface down to between 40 and 125 feet below ground surface (bgs). These gravelly, sandy loam soils immediately underlying the Unit are highly permeable. Underlying the Stony Creek alluvial fan is Pliocene to Pleistocene age Tehama Formation. Beneath the Tehama Formation, at depths of several hundred feet, are marine sedimentary deposits.

First encountered groundwater is generally about 22 feet below the native ground surface in the vicinity of the Unit. Groundwater elevations range from approximately 204 feet MSL to 225 feet MSL. Four wells make up the current groundwater monitoring system. Additional monitoring wells have been used in the past to assess groundwater quality, but most of these wells were abandoned during or right after Unit closure activities commenced. Three of the additional wells that still remain on-site will be required to be abandoned under permit from Glenn County in these revised Waste Discharge Requirements.

The land where the Facility is located was originally used as a sand and gravel extraction facility for construction of Interstate 5 during the 1960's. The Discharger began operation of the drilling mud disposal facility in 1970 and ceased accepting wastes in September 1991. Wastes disposed at the Facility consisted of drilling mud and drill cuttings from installation of gas wells and exploratory holes in Northern California. The Discharger estimated that approximately 148,000 cubic yards of waste had been discharged to the unclassified Unit by April 1990.

Wastes at the facility were initially classified as inert. However, routine groundwater monitoring found concentrations of Total Dissolved Solids (TDS), Sodium, Chloride, and Sulfate elevated in downgradient wells. Former Waste Discharge Requirements Order No. 97-032 reclassified the wastes as designated waste in response to the elevated salinity in downgradient groundwater monitoring wells. Statistical evaluation of groundwater monitoring data for the entire period of record finds concentrations of most constituents decreasing in downgradient wells. This downward trend began once disposal of drilling mud ceased in 1991. Notable exceptions to the general downward trend are increasing trends for pH and Electrical Conductivity in downgradient well MW-4. Overall, statistical trends in downgradient wells indicate that water quality at the Facility has improved since monitoring began. Statistical trends for the post-closure period since 2001 indicate that groundwater quality has stabilized,

with the exception of Alkalinity. Alkalinity shows increasing trends both up and downgradient of the Facility, which is likely unrelated to disposal activities.

In 2001, the Discharger constructed a final cover system over the Unit as a corrective action measure in response to the elevated salinity in downgradient wells. The final cover system consisted of a two-foot foundation layer of drilling mud, overlain by a one-foot low-permeability layer (1×10^{-6} cm/sec), which is overlain by a one-foot vegetated erosion resistant layer.

This Order revises Waste Discharge Requirements Order No. 98-162 to prescribe post-closure maintenance requirements for the Facility and additionally implements applicable sections of Title 27, California Code of Regulations.

DPS: sae
02/25/2009